CTEH®

THE SCIENCE OF READY℠

INTERCONTINENTAL TERMINALS COMPANY - TANK FIRE

Preliminary Data Summary

Deer Park, TX

March 19, 2019

Project #111356

9962969

1.0 Introduction

On March 17, 2019 Intercontinental Terminals Company (ITC) requested that CTEH® conduct air monitoring in the surrounding community after a tank fire at the Deer Park, TX terminal. CTEH® arrived on-site on March 17, 2019 and began air monitoring and air sampling operations. This report summarizes air monitoring data collected from March 17, 2019 17:02 CDT to March 19, 2019 17:30 CDT.

2.0 Air Monitoring and Sampling Methods

CTEH® developed and implemented an Air Sampling and Analysis Plan (SAP) to document and quantify the release of fugitive emissions, if any, from the fire at ground level. All instrumentation was calibrated at least once per day or per manufacturer's recommendations. Target analytes were measured as listed in **Table 1**, below. Hand-held air monitoring consisted of roaming air monitoring in the surrounding community. All hand-held air monitoring was conducted in the breathing zone.

CTEH® has also collected analytical air samples for a suite of volatile organic compounds (VOCs) at 4 locations in the surrounding area. These samples will be sent to a 3rd-party laboratory for rush chemical analysis. A map of these analytical air sampling locations is provided in **Attachment A.**

3.0 Air Monitoring Results

Attachment A depicts the site location and hand-held monitoring locations for this reporting period.

Table 1 summarizes the results for community hand-held air monitoring readings.

Table 1: Community Hand-Held Real-Time Air Monitoring Results

Analyte	Instrument	No. Readings	No. Detections	Range[1]	Action Level Value*	Basis for Action Level
Benzene	Gastec #121L	7	0	< 0.05 ppm	2.25ppm	¼ EPA 8hr AEGL-1
	UltraRAE	328	0	< 0.05 ppm	2.25ppm	¼ EPA 8hr AEGL-1
Carbon Monoxide	MultiRAE	68	0	< 1 ppm	25ppm	½ TEEL-O
Formaldehyde	Gastec #91L	1	0	< 0.05 ppm	0.45ppm	½ EPA 8hr AEGL-1
Hexane	Gastec #102L	14	0	< 1 ppm	25ppm	½ DOE SCAPA TEEL-0 Value
Hydrogen Sulfide	Gastec #4LL	24	0	< 0.1 ppm	0.25ppm	½ PAC-1 Value
	MultiRAE	226	0	< 0.1 ppm	0.25ppm	½ PAC-1 Value
LEL	MultiRAE	361	0	< 1 %	1% (2.5% corrected value)	Elevated LEL

Analyte	Instrument	No. Readings	No. Detections	Range[1]	Action Level Value*	Basis for Action Level
Naphtha	Gastec #106	50	0	< 0.1 mg/L	50ppm	½ DOE SCAPA TEEL-0 Value
Naphthalene	Gastec #60	46	0	< 0.1 ppm	5ppm	½ ACGIH TLV-TWA
Nitrogen Dioxide	Gastec #9L	25	0	< 0.1 ppm	0.25ppm	½ EPA 8hr AEGL-1
	MultiRAE	98	0	< 0.1 ppm	0.25ppm	½ EPA 8hr AEGL-1
Oxygen	MultiRAE	165	165	20.9 %	19.5%	
PM2.5	AM510	246	246	0.003 - 0.108 mg/m3	0.138 mg/m^3	Wildfire Smoke Guidelines for 1 hr. avg. upper-bound breakpoint for unhealthy for sensitive groups AQI
Sulfur Dioxide	Gastec	2	0	< 0.1 ppm	0.1ppm	½ EPA 8hr AEGL-1
	MultiRAE	99	0	< 0.1 ppm	0.1ppm	½ EPA 8hr AEGL-1
Toluene	Gastec #122L	63	0	< 0.5 ppm	33.5ppm	½ EPA 8hr AEGL-1
VOCs	MultiRAE	418	2	0.1 - 0.1 ppm	0.5ppm	Approximate background level
Xylene	Gastec #123L	81	0	< 1 ppm	65ppm	½ EPA 8hr AEGL-1

[1]Maximum detections preceded by the "<" symbol are considered non-detections below the limit of detection (LoD) value to the right.

No detections during this reporting period exceeded the action levels as outline in the CTEH® SAP. Note that some action levels (i.e., $PM_{2.5}$) may have a time-component associated with them (i.e., over 1 hr. or 8 hrs.). Total VOCs and $PM_{2.5}$ have been below levels that would represent a public health concern.

4.0 Weather Conditions

Attachment B contains a wind rose depicting wind speed and direction for this reporting period. Data was acquired from the Texas Commission on Environmental Quality (TCEQ) Lynchburg Ferry meteorological station located on Tidal Road approximately 2 mi NNE of the fire.

Attachment A

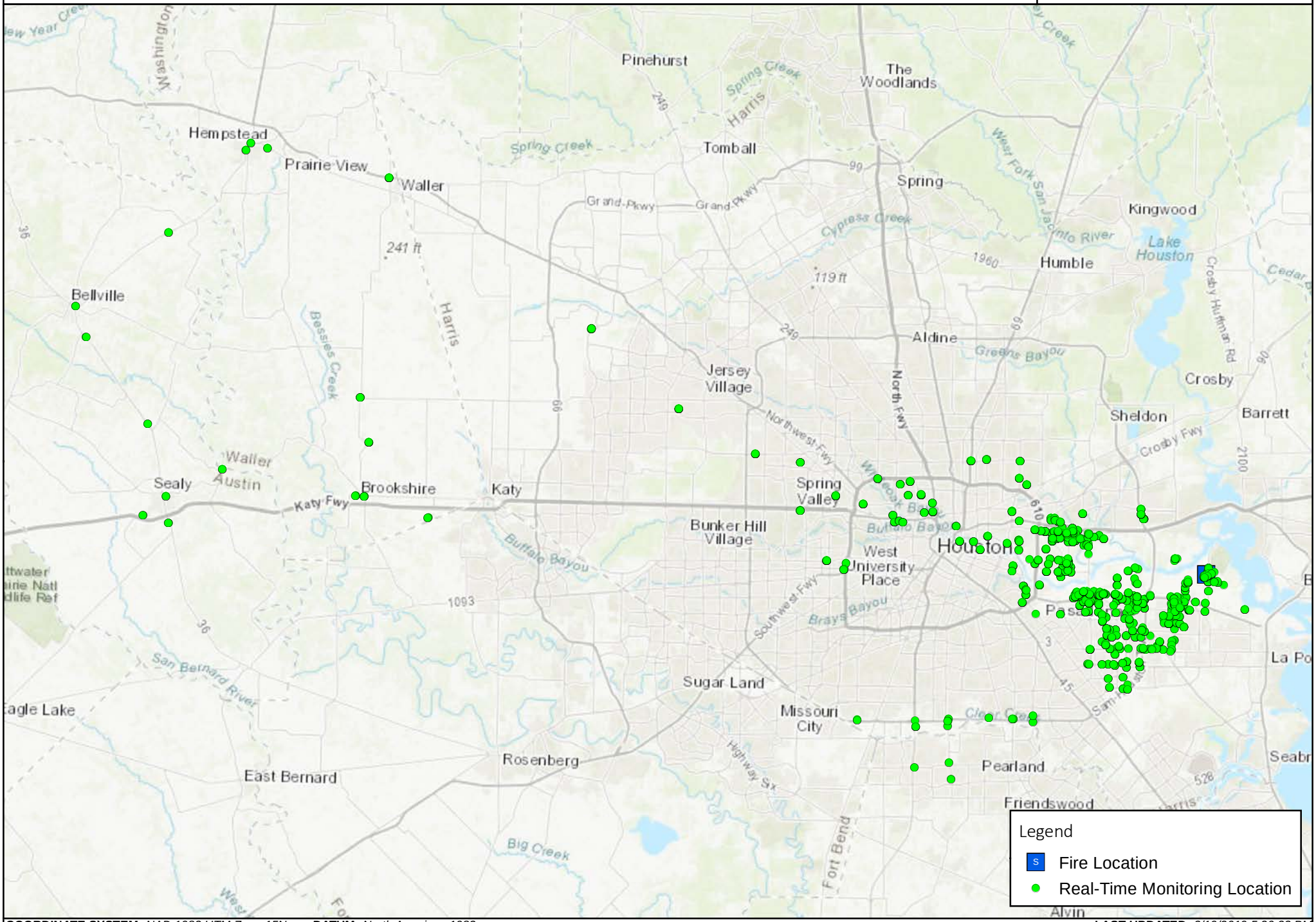
CTEH Monitoring Locations

Hand-Held Real-Time Monitoring Locations

ITC Tank Fire Deerpark, TX

0 7.5 15 Miles

Project:111356
Client: ITC
City: Deerpark, TX
County: Harris



COORDINATE SYSTEM: *NAD 1983 UTM Zone 15N* **DATUM:** *North American 1983* **LAST UPDATED:** *3/19/2019 5:26:33 PM*

Attachment B

Meteorological Conditions

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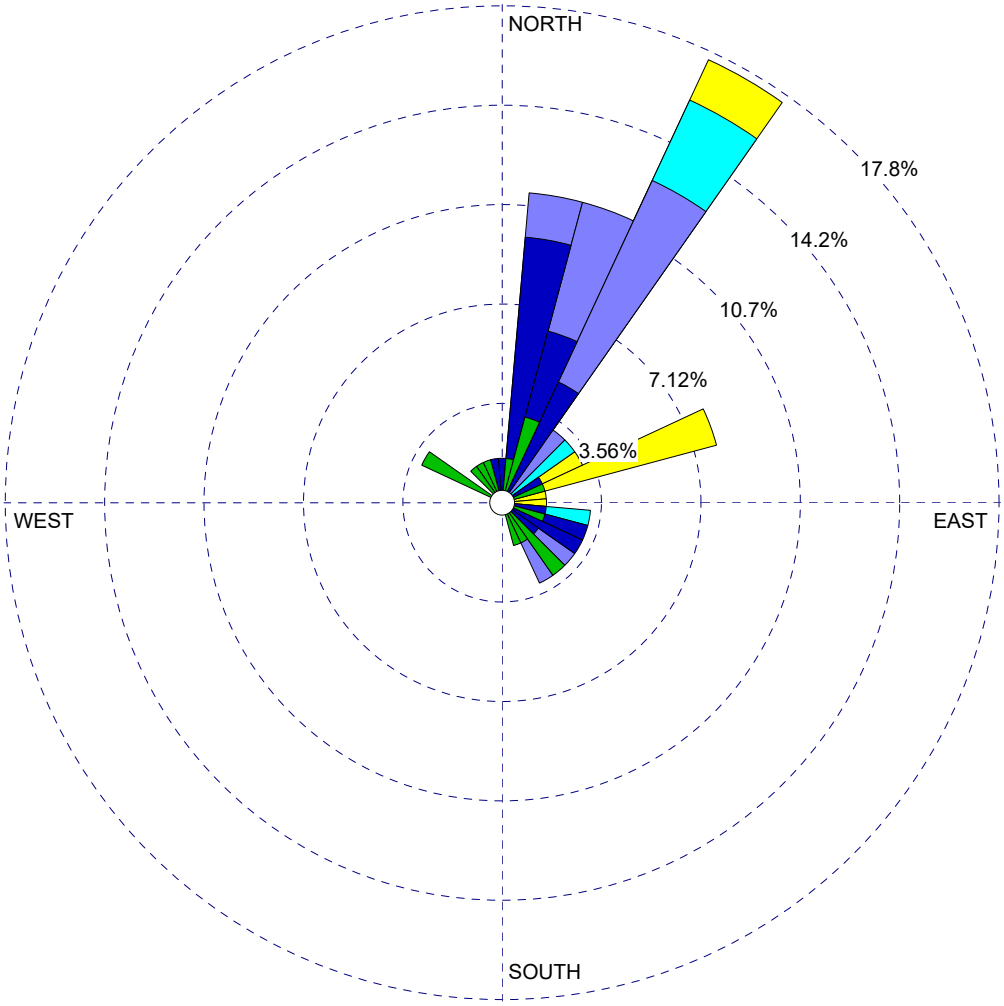
WIND ROSE PLOT:

Station #Lynchburg Ferry

DISPLAY:

Wind Speed
Direction (blowing from)



WIND SPEED
(MPH)

- >= 21.58
- 9.72 - 21.58
- 7.78 - 9.72
- 5.83 - 7.78
- 3.89 - 5.83
- 1.94 - 3.89

Calms: 3.17%

COMMENTS:	DATA PERIOD: **Start Date: 3/17/2019 - 00:00** **End Date: 3/19/2019 - 11:00**	COMPANY NAME:	
		MODELER:	
	CALM WINDS: **3.17%**	TOTAL COUNT: **60 hrs.**	
	AVG. WIND SPEED: **5.50 MPH**	DATE: **3/19/2019**	PROJECT NO.: **111356**